



Building biosecurity resilience

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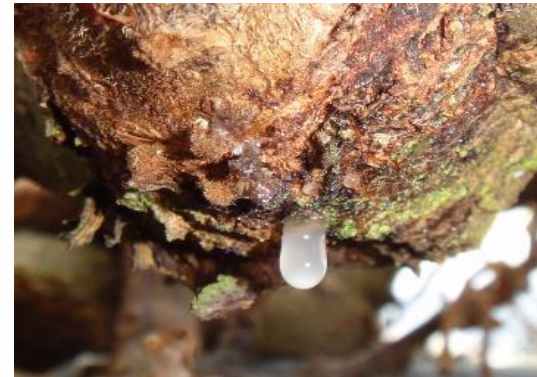
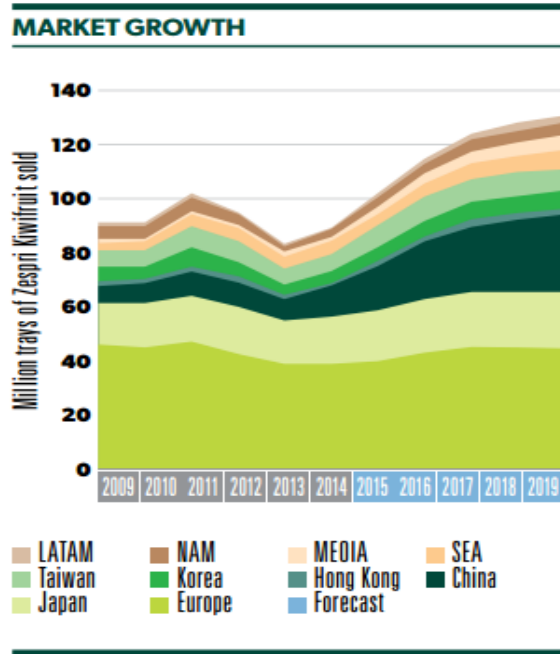
LEGEND

 Kiwifruit Orchards





Psa: production impacts to kiwifruit



An uncertain future



Cultivar cut over



Biosecurity beginnings

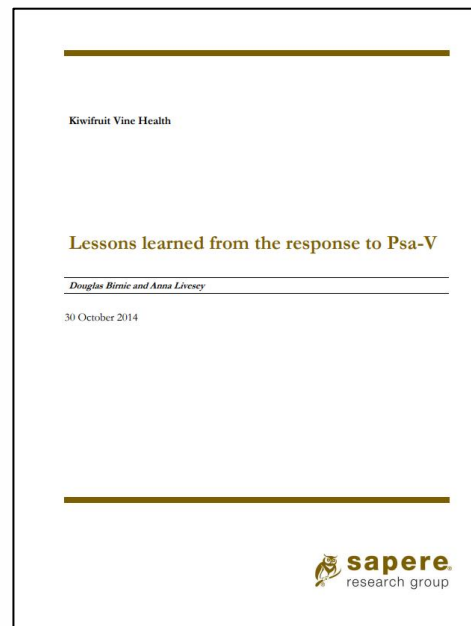


Lessons learned from Psa response



Success attributed to:

- Integrated industry and existing governance systems
- Quick decision to est. dedicated organisation
- Skilled leadership operating under pressure
- Relationships with Govt, and banking sector
- Focus on managing human impact (& bacteria)
- Can do attitude and ability to adapt
- Investment in breeding





Lessons from Psa – our work ons

Lacked the following which would have made things easier:

- Biosecurity awareness which contributed to sense of crisis
- Readiness plans
- Basic on-orchard practices as routine
- A suitable diagnostic test
- Relationships and information sharing with other sectors
- 3 years to implement a National Pest Management Plan

Our Most Unwanted threats



Biosecurity impacts: #1 market access

Fruit Fly

- High risk passenger pathway
- Detected post-border on 15 occasions
- \$695M potential impact to kiwifruit industry



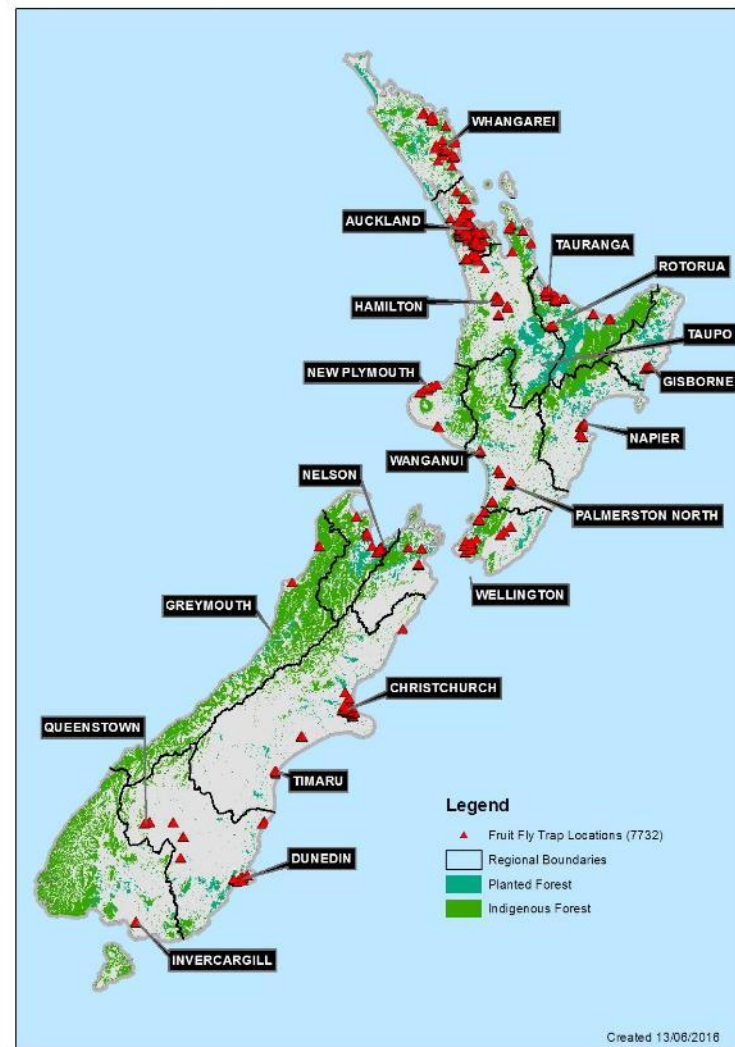
Fruit fly surveillance

An official programme led by government



Biosecurity New Zealand

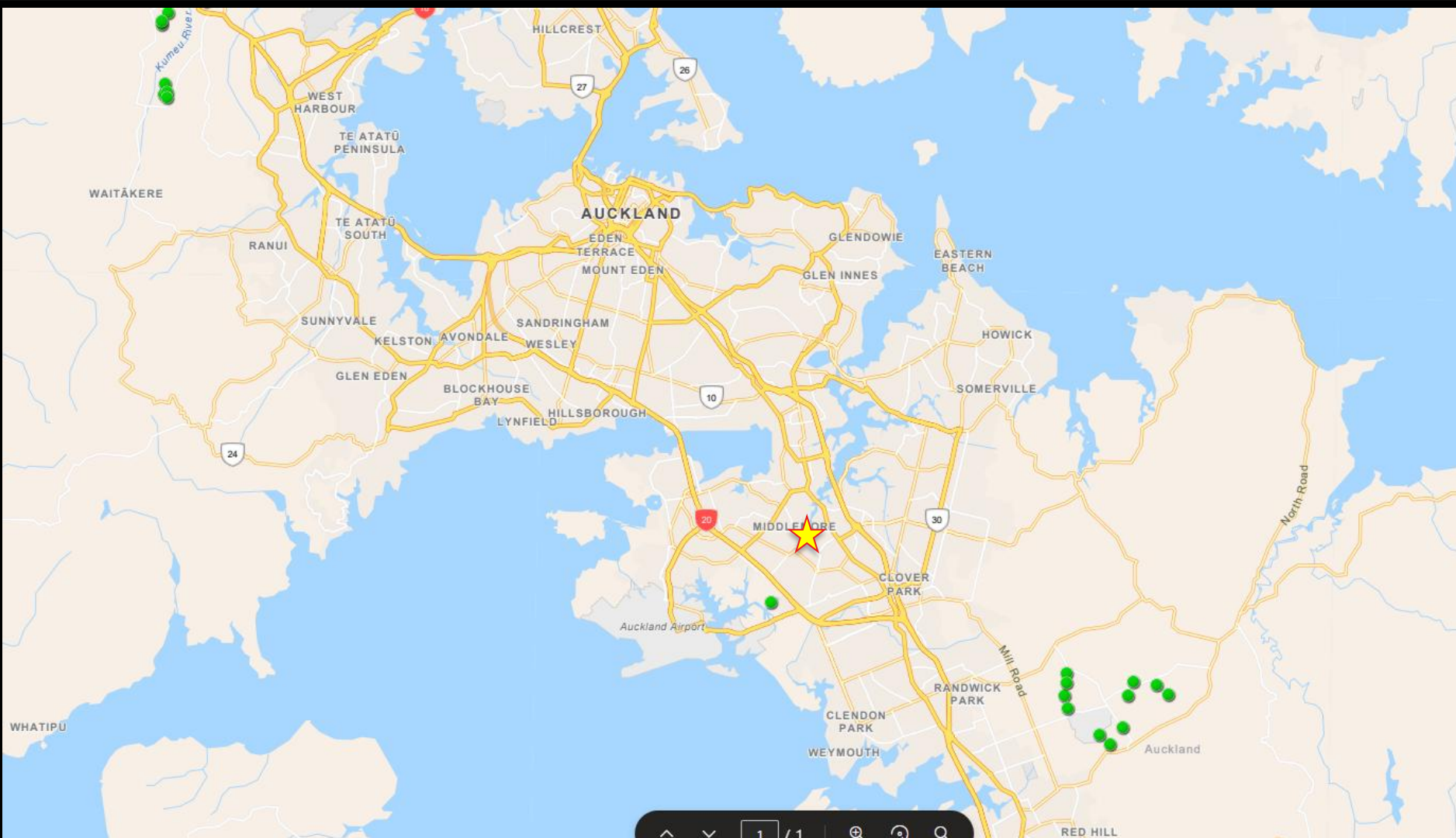
Tiakitanga Pūtaiao Aotearoa



Previous FF detections in NZ



Year	Species	Location
March 1990	Fijian Fly	Auckland
May 1995	Queensland fruit fly	Whangarei
April 1996	Queensland fruit fly	Auckland
April 1996	Papayae fruit fly (now part of <i>B. dorsalis</i> complex)	Auckland
May 1996	Mediterranean fruit fly	Auckland
May 2012	Queensland fruit fly	Auckland
Jan 2014	Queensland fruit fly	Whangarei
April 2014	Queensland fruit fly	Whangarei
Jan 2015	Queensland fruit fly	Grey Lynn, Auckland
Jan 2016	Tau fly	Auckland
Feb 2019	Facialis fruit fly	Otara, Auckland
Feb 2019	Queensland Fruit Fly	Devonport, Auckland
Feb 2019	Queensland Fruit Fly	Northcote, Auckland
Jan 2025	Oriental Fruit Fly	Papatoetoe, Auckland
Feb 2025 - Ongoing	Oriental Fruit Fly (ongoing)	Birkdale, Auckland



Industry involvement



Biosecurity impacts: #2 fruit loss



 LIVE BUG
INTERCEPTIONS
THIS SEASON **102**
51 ARRIVED WITH
PASSENGERS!



Biosecurity impacts: #3 vine death



***Ceratocystis* – an emerging threat to kiwifruit**



- 2010 Brazil: evolved from a native pathogen to impact kiwifruit
- Spread through budwood and rootstock movements
- Up to 50% vine loss
- No tolerant commercial cultivars
- No effective agrichemical control
- Kiwifruit no longer viable

Ceratocystis - First reports to kiwifruit in Brazil



Credit: Joy Tyson

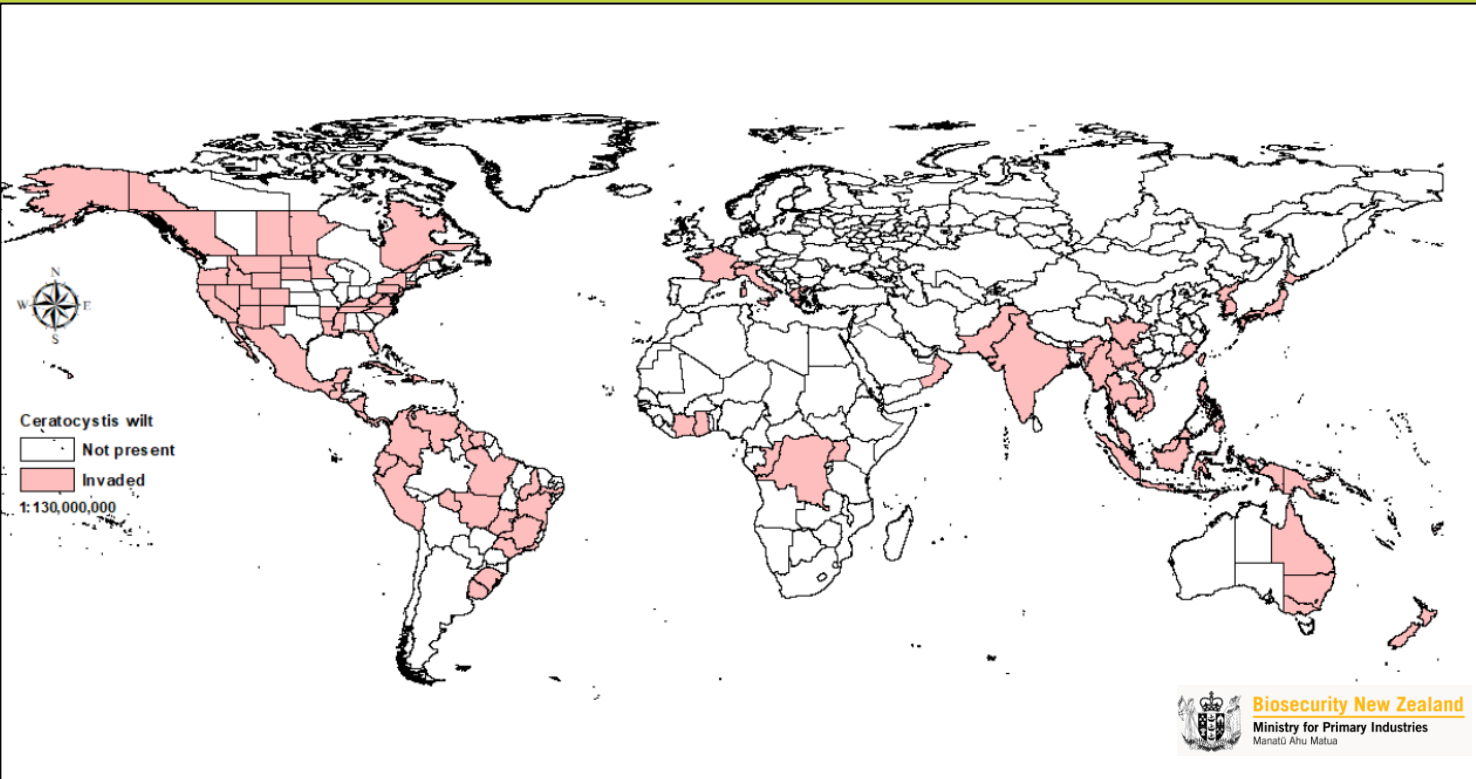


What to look out for

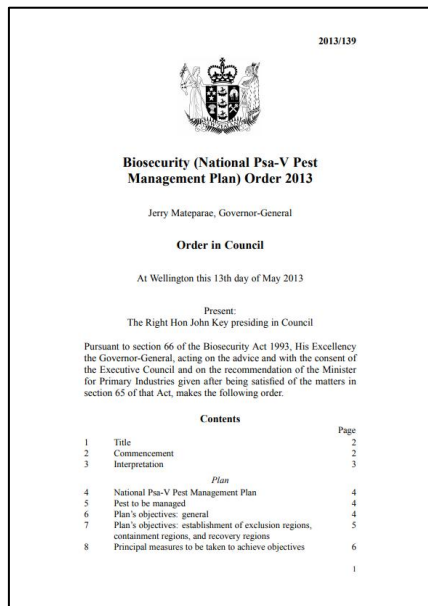
- Wilting
- Circular pattern of dead vines
- Browning of the xylem
- Some Psa-like leaf spotting
- Fruit shrivel in late stage infection
- Brown like lesions



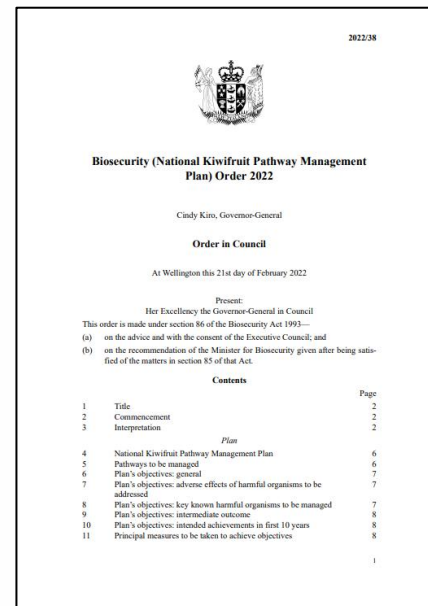
Ceratocystis as a global threat



National Kiwifruit Pathway Management Plan



Psa Plan 2013-2023



Pathway Plan 2022 -



BIOSECURITY PLANNING



Plant material

- Rootstock and grafted plants
- Mature plants
- Budwood
- Pollen
- Shelter plants

Organic matter inputs

Compost, soil and mulch

Kiwifruit orchard



People and equipment

- Orchard management services
- Shelter belt trimmers
- Spray contractors
- Orchard infrastructure
- Harvest crews and bins
- Grafters

Why do you need a biosecurity plan?



1. Reduce risk to your investment
2. Reduce risk to others
3. Helps you prepare for an incursion
4. Provides confidence you are compliant
5. Planning helps prevent complacency

How to build your Plan



*You know your
orchard best. It's
about what works
for you.*

What your Plan looks like



Covers all the important steps:

- moving machinery, tools and plant material
- tracing and recording
- managing risks that might already be present
- noticing and reporting anything unusual



Everybody who's involved in your orchard/business is on the same page



Establishes good biosecurity practices:

- hundredfold reward
- smooth operation of day-to-day business
- avoid financial problems, movement restrictions, and possible market access issues

On-Orchard Biosecurity Plans

Growers have and operate to a plan that matches their property



STEP 1

Understand your risks



STEP 2

Agree what must happen on site



STEP 3

Source and trace clean plant material



STEP 4

Check and clean



STEP 5

Report the unusual



STEP 1

Understand your risks



Understanding and keeping aware of risks from offshore, within your region, and at your orchard border.

- What do you do to understand these risks?
- How might threats cross and impact your orchard border?



STEP 2

Agree what must happen on site



Setting clear and well-understood expectations, and training people so they stay up-to-date and engaged with your expectations.

- Who are the people you have established clear expectations with? How?
- What's your training plan to make sure people understand your expectations and requirements?
- How do you communicate with visitors, and check that your requirements are being met?



STEP 3

Source and trace clean plant material



Sourcing clean plant material; making sure it is clean; and keeping good records.

- Where do you get your rootstock, budwood, pollen, compost, and any other type of plant material?
- How do you make sure it is clean?
- What kind of records do you keep and are they up-to-date?

KVH OSI

Dashboard

Dashboard

Connection tracing

Invite

Company



Connection insights



Total properties

68



Total movements

145



Unique connections

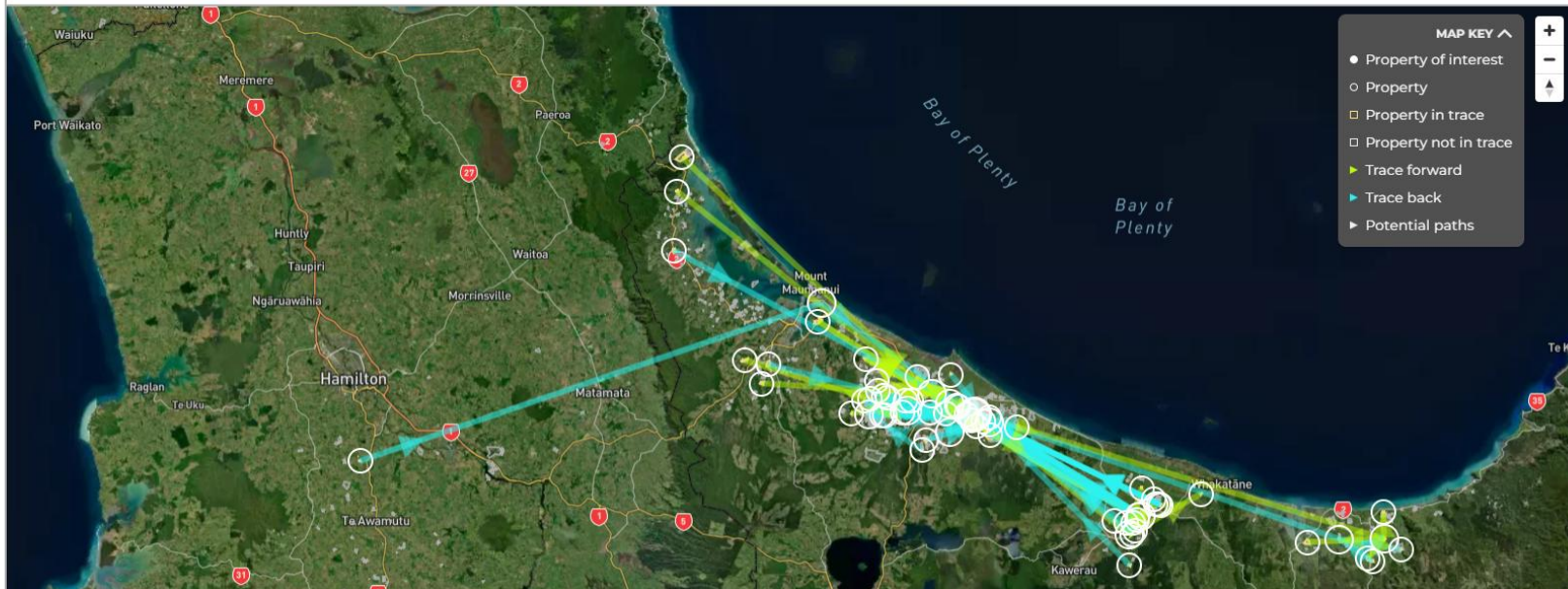
79

Map

List

☐ Potential paths ☒ Trace forward ☒ Trace back ☒ Arrows

2 steps





STEP 4

Check and clean



Managing access to your orchard and keeping tools, equipment, vehicles, and people 'clean'.

- What do you do to manage the risk that comes with everyone and everything that crosses your boundary?
- How do you make sure items and people are appropriately clean/free of soil/plant material?



STEP 5

Report the unusual



Understanding the importance of monitoring for early detection; making a report quickly; and having good records for tracing if needs be.

- How do you look for threats?
- How would you make a report? Have you made any recently?
- Where are your records and who can access them?
- Do you have reporting and support contacts handy?

